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REMARKS

Applicants thank the Examiner for the thorough consideration given to the present application. Claims 1-41 are now present in this application. The Examiner is respectfully requested to reconsider his rejections in view of the amendments and remarks as set forth below.

Rejection under 35 USC 112

Claims 1-41 stand rejected under 35 USC 112, second paragraph as being indefinite. This rejection is respectfully traversed.

The Examiner has pointed out that the claim utilizes the "adapted to" language relating to the splitter. By way of the present amendment, this language has been removed so that the structure of the splitter is now more definitely claimed.

Regarding claim 15, the Examiner points out that there is no antecedent basis for "the predetermined output power" in line 2. Applicants have now utilized "a" to avoid this problem.

Rejection under 35 USC 103

Claims 1-41 stand rejected under 35 USC 103 as being obvious over KMETEC et al., U.S. Patent 5,757,831, in view of MIZUNO et

al., U.S. Patent 5,978,346. This rejection is respectfully traversed.

The Examiner has cited KMETEC et al. to show a light source 10 for emitting a light beam, a beam splitter 50 for splitting a light beam and a detector 56 for measuring the power of the secondary beam. The Examiner admits that this reference does not show that the power of the secondary output is kept at a substantially fixed percentage of the power of the primary output.

The Examiner cites MIZUNO et al. as showing an optical system with a beam splitter having a dielectric coating, wherein the Examiner states that it would be obvious to substitute MIZUNO et al.'s beam splitter into KMETEC et al.'s system and that since the resulting structure is the same as that claimed, that the properties and characteristics would be inherent.

Applicants submit that the claims are not obvious over this combination of references. Even if the MIZUNO et al. reference does teach a dielectric coating, it does not teach the remaining claimed structure of the invention.

The Examiner stated that the claimed characteristics of the beam, namely that the power of the second beam is a fixed percentage of the first beam, is presumed to be inherent. The Examiner has merely pointed out that MIZUNO et al. has a dielectric coating. The Examiner has not pointed out why the dielectric

coating in the reference is exactly the same dielectric coating as that of the present invention. Since the reference does not show the relationship between the two beams as presently claimed, and since there are many variations dielectric coatings, Applicants submit that, unless the Examiner can adequately show that the coatings are the same and that the result would be the same, the present invention would not be obvious over these references. If the Examiner persists in this rejection, he is requested to point out why he feels that the dielectric coatings are the same and why the results would be inherent. Furthermore, Applicants submit that the Examiner has not met his burden of showing motivation for combining the two references. The Examiner has merely stated that it would be obvious because of ease of manufacturing. However, the Examiner has not provided sufficient motivation for one skilled in the art to modify the KMETEC et al. device. Applicants submit that the combination of references would not be obvious.

Furthermore, MIZUNO et al. describes a polarization beam splitter so that a linearly polarized incoming light beam is divided into two components, an s-polarized and a p-polarized light. This ensures sufficient reflection/transmission of light to a detector even though the polarization of the incoming light beam is disturbed due to the birefringence of an optical disc. Thus, this beam splitter is designed to maximize the transmittance or

reflectance of the beam splitter so that a maximum signal is detected even if the polarization state of the incoming light has been disturbed.

MIZUNO et al. discloses a number of transmittance/reflectance curves which initially seem to be similar to those shown in Fig. 4 of the present application. However, the curves in MIZUNO et al. show full transmission spectra from 0-100% transmission, whereas the transmittance curve in Fig. 4 of the present application shows the spectrum only from 0-1%. Accordingly, the curves in MIZUNO et al. show no indication of ripple effects. These would be too small to show in the spectra shown in the patent and they are not of importance in this system since the purpose of the beam splitter is to ensure that enough radiation reaches the detector so as to achieve an acceptable signal-to-noise ratio. There is no disclosure of the two resultant beams having a relationship, nor is there any need for providing such a relationship.

The Examiner states that the beam splitter disclosed by MIZUNO et al. is thermally stable. However, there is no disclosure as to thermal stability of the transmission/reflection properties of the beam splitter. The thermal cycling of the beam splitter is mentioned, and it is said that the optical properties are not changed after thermal cycling. However, this does not provide any indication of the temperature stability of the beam splitter in

respect to the transmission/reflection properties. It only provides information that the beam splitter is mechanically stable and does not change optical properties when exposed to thermal cycling tests or other lifetime tests.

In order for one skilled person to use the beam splitter according to MIZUNO et al. in a system as disclosed by KMETEC et al., it would be necessary to have an exact knowledge of the polarization state of the light emitted from the light source. Furthermore, in order to obtain a secondary light beam having a power which is a substantially fixed percentage of the power of the primary output light beam, it would be required that the state of polarization of the light source is very stable, thus imposing strict properties thereto. A very careful adjustment of the system is required to obtain a properly working system when a polarization dependent beam splitter is employed, and still a fixed percentage would not be obtained.

Furthermore, there is no teaching in MIZUNO et al. of how a beam splitter should be applied to obtain a fixed percentage, since MIZUNO et al. only teaches how to obtain a maximum output beam and deviations of the actual value are not pertinent as long as the signal is strong enough to achieve a reasonable signal-to-noise ratio. In view of this, Applicants submit that independent claims 1

and 27 are not obvious over this combination of KMETEC et al. and MIZUNO et al.

Claims 2-26 and 28-41 depend from these allowable independent claims and, as such, are also considered to be allowable. In addition, many of these dependent claims recite other features not seen in the references and are additionally allowable.

Conclusion

In view of the above remarks, it is believed that the claims clearly distinguish over the parent relied upon by the Examiner, either alone or in combination. In view of this, reconsideration of the rejections and allowance of all the claims are respectfully requested.

In the event that any outstanding matters remain in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), the Applicants respectfully petition for a three (3) month extension of time for filing a response in connection with the present application and the required fee of \$465.00 is attached herewith.

Appl. No. 10/086,540

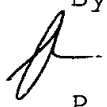
If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,


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